FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)

OFFICE OF AIR QUALITY
and
INDIANAPOLIS ENVIRONMENTAL RESOURCES MANAGEMENT DIVISION
AIR QUALITY MANAGEMENT SECTION

National By-Products, Inc.
700 West Southern Street
Indianapolis, Indiana 46225

National By-Products, Inc. (herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the facilities listed in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 and contains the conditions and provisions specified in 326 IAC 2-8 and 40 CFR Part 70.6 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments) and IC 13-15 and IC 13-17 (prior to July 1, 1996, IC 13-1-1-4 and IC 13-7-10).

Operation Permit No.: F097-5579-00243	
Issued by: Dr. Robert Holm, Administrator	Issuance Date: 12-13-96

First Significant Permit Revision **097-11785-00243**	Pages Affected: 1, 4, 15, 20, 20a, 22, 23, 23a, 27, 28
Issued by: Daniel B. Dovenbarger Administrator	Issuance Date: May 4, 2001

SECTION A SOURCE SUMMARY

A.1 General Information [326 IAC 2-8-3(c)]
The Permittee owns and operates an animal by-products rendering plant.

Responsible Official:	Mr. Mark Myers
Source Address:	700 West Southern Street, Indianapolis, Indiana 46225
Mailing Address:	P.O.B. 33639, Indianapolis, IN 46203
SIC Code:	2077, 2047, 2048
County Location:	Marion
County Status:	Nonattainment for Particulate Matter and Sulfur Dioxide
Source Status:	Synthetic Minor Source, FESOP Program

A.2 Emission Units and Pollution Control Summary [326 IAC 2-8-3(c)]
The stationary source consists of the following emission units and pollution control devices:

(a) Two (2) Natural Gas and fuel oil #2 boilers (Nebraska and Cleaver Brooks), 39.5 million BTU per hour heat input capacity each, identified as emission units #1 and #2.

(b) Animal by-products rendering system, consisting of one (1) cooker (Dupps Co.model 320U Supercookor), 39,000 pounds per hour of raw material input and 9,750 pounds per hour discharge capacity (dry meat meal production - 25% of input) and ACC forced draft (Dupps Co. model 2P28) air condenser, identified as emission unit #3. Emissions are controlled by the Venturi Scrubber and Packed Bed Tower Scrubber.

(c) One (1) truck meat meal unload pit 12.5 tons per hour feed meal input capacity, identified as emission unit #4.

(d) One (1) hammermill 5 tons per hour feed meal input capacity, identified as emission unit #5.

(e) Two (2) link-belt conveyors 25 tons per hour feed meal input capacity, identified as emission unit #6 and emission unit #7.

(f) One (1) Millpoint PASN-75 packed bed tower scrubber for fugitive raw material odors control, identified as emission unit #8.

A.3 Insignificant Activities [326 IAC 2-8-3(c)(3)(i)]
This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(20): small closed top degreaser; small #2 Diesel A.S.T. (above ground storage); equipment for maintenance activities (painting).

A.4 FESOP Applicability [326 IAC 2-8-2]
This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) for a Federally Enforceable State Operating Permit (FESOP).

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emissions Limitations [326 IAC 2-8-4(1)]

C.1 Overall Source Limit [326 IAC 2-8]
The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8, the potential to emit any regulated pollutant from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period.

(b) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided the source's potential to emit does not exceed the above specified limits.

(c) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.2 SO_2 and NOx Emissions

(a) Sourcewide SO_2 emissions shall be less than 100 tons per year, such that 326 IAC 2-7 shall not apply.

(b) Sourcewide NOx emissions shall be less than 100 tons per year, such that 326 IAC 2-7 shall not apply.

C.3 Opacity Limitations
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of thirty percent (30%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.4 Open Burning
The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6.

C.5 Fugitive Dust Emissions
he Permittee shall be in violation of 326 IAC 6-4 if any of the criteria specified in 326 IAC 6-4-2(1) through (4) are violated.

C.6 Operation of Equipment [326 IAC 2-8-5(a)(4)]

(a) All equipment that potentially might emit pollutants into the ambient air shall be properly operated and maintained.

(b) Unless otherwise stated in this permit, all air pollution control equipment listed in this permit shall be operated at all times that the emission unit(s) vented to the control equipment is in operation.

(c) The permittee shall perform all necessary maintenance and make all necessary attempts to keep all air pollution control equipment in proper operating condition at all times.

SECTION D.1 FACILITY OPERATION CONDITIONS

Two (2) natural gas and fuel oil #2 fired boilers (Nebraska and Cleaver Brooks) 39.5 million BTU per hour heat input capacity each, identified as emission unit #1 and emission unit #2, burning Natural Gas, Distillate Oil #2, and Animal Fat/Greases.

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 Particulate Matter

(a) That pursuant to 326-IAC 6-1-2 (Nonattainment Area Particulate Limitations) PM emissions from emission units #1 and #2 shall not exceed 0.15 pound per million Btu when firing distillate oil (fuel oil #2) or Animal Fat/Greases and 0.01 grains per dry standard cubic foot when firing natural gas.

(b) That pursuant to NSPS 40 CFR Part 60, §60.43(c), the owner or operator of this source shall not cause to discharge into the atmosphere from the boilers EU #1 and #2 gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of no more than 27 percent opacity.

D.1.2 Sulfur Dioxide

(a) That pursuant to 326 IAC 7-1.1-2 (Sulfur Dioxide Limitations) and 326 IAC 2-8 (FESOP Program), sulfur dioxide emissions from the combustion of distillate oil (fuel Oil #2) or Animal Fat/Greases (equivalent of Oil #6) each shall be limited to 0.5 pounds per million BTU heat input (the equivalent of 0.5% by weight sulfur content at a higher heating value of 0.14 MMBtu per gallon for Oil #2 and 0.15 MMBtu per gallon for Animal Fat/Greases).

(b) The Permittee is limited to burning no more than 226,333 gallons of fuel oil #2 per month, so that the sourcewide sulfur dioxide (SO_2) emissions shall not exceed 8.33 tons per month, and 326 IAC 2-7 (Part 70 Permit Program) shall not apply.

(c) For the purposes of determining compliance with SO_2 limit, every million cubic feet of natural gas burned is equivalent to 8.45 gallons of Oil No. 2; every gallon of Animal Fat/Greases burned is equivalent to 0.553 gallons of Oil #2.

D.1.3 Nitrogen Oxides

(a) The Permittee is limited to burning no more than 296,917 gallons of Animal Fat/Greases per month, so that the sourcewide Nitrogen Oxides (NOx) emissions shall not exceed 8.33 tons per month, and 326 IAC 2-7 (Part 70 Permit Program) shall not apply.

(b) For the purposes of determining compliance with NOx limit, every million cubic feet of natural gas burned is equivalent to 2,545 gallons of Animal Fat/Grease, every gallon of No. 2 oil burned is equivalent to 0.364 gallons of Animal Fat/Grease.

Compliance Monitoring Requirements [326 IAC 2-8-5(a)(1)]

D.1.4 Visible Emissions Notations

(a) Daily visible emission notations of the Emission Units #1 and #2 stack exhausts shall be performed during normal daylight operations when exhausting to the atmosphere and when

burning distillate oil #2 or animal fat/greases. A trained employee shall record whether

emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Preventive Maintenance Plan for these units shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.1.5. Sulfur Dioxide Emissions

The Permittee shall:

(a) Obtain a shipping receipt from the distillate oil No. 2 supplier for each shipment of distillate oil delivered certifying that the shipment complies with ASTM specifications (fuel sulfur content is 0.5% or less) for distillate oil No. 2 combusted in Emission Units #1 and #2.

(b) Perform a fuel analysis of Animal Fat/Greases each month when it is burned in the boilers Emission Units #1 and #2 to demonstrate compliance with Condition D.1.2 (a).

Section D.2 FACILITY OPERATION CONDITIONS

(a)	Animal by-products rendering system, consisting of one (1) cooker (Dupps Co. model 320U Supercookor), 39,000 pounds per hour of raw material input and 9,750 pounds per hour discharge capacity (dry meat meal production - 25% of input) and ACC forced draft (Dupps Co. model 2P28) air condenser, identified as emission unit #3.
(b)	Emission unit #3 emissions are controlled by the Millpoint Venturi Scrubber model VCS-008 and Millpoint packed bed tower scrubber, model PCT-008.
(c)	One (1) Millpoint packed bed tower scrubber for fugitive raw material odors control, model PASN-75, identified as emission unit #8.

Limitations and Standards [326 IAC 2-8-4(1)]

D.2.1 Particulate Matter

(a) That pursuant to 326 IAC 6-3-2 (Process Operations: Particulate Emission Limitations) the particulate matter emissions from Emission Unit # 3 shall not exceed 11.85 pounds per hour.

(b) The Venturi Scrubber and the Packed Bed Tower Scrubber PCT-008 shall be in operation at all times when the Animal by-products rendering system Emission Unit #3 is in operation, in order to comply with this limit.

D.2.2 Volatile Organic Compounds (VOC)

(a) The VOC emission from Emission Unit #3 shall be limited to less than 0.400 pounds per ton of meat meal production.

(a) Meat meal production throughput shall be limited to 3,000 tons per month, such that the potential VOC emissions are less than 25 tons per year and 326 IAC 8-1-6 (General VOC Reduction Requirements) shall not apply.

D.2.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]
A Preventive Maintenance Plan, in accordance with Condition B.13 of this permit, is required for this facility.

D.2.4. Fugitive odor control
Plant air scrubber emission unit #8 will be in operation at all times when trailers containing odorous materials will be parked inside the building, when odorous raw materials are being dumped, handled, stored or ground, and when hot meal is being handled, stored or ground in the mill building.

Testing Requirements [326 IAC 2-8-5]

D.2.5 Particulate Matter
That during the period between 180 days and 360 days after issuance of this permit, the permittee shall perform PM and PM10 testing utilizing methods per 40 CFR Part 60 Appendix A, Method 5,

17, 40 CFR Part 51 Appendix M, Method 201, 201a, 202, as approved by the Administrator. This test shall be repeated at least once every five years from the date of this valid compliance demonstration. PM10 includes filterable and condensible PM10.

D. 2.6 Volatile Organic Compounds (VOC)
That during the period between 180 days and 360 days after issuance of this permit, the permittee shall perform VOC testing utilizing a method acceptable to ERMD and approved by the Administrator. This test shall be repeated at least once every five years from the date of this valid compliance demonstration.

Compliance Assurance Monitoring Requirements [326 IAC 2-8-5(a)(1)]

D.2.7 Volatile Organic Compounds (VOC)
That pursuant to 326 IAC 2-8-5 (FESOP: Compliance Requirements) the Permittee shall: daily monitor and record meat meal production (tons) which shall not exceed 3,000 tons per month, such that VOC emissions shall be less than 25 tons per year.

D.2.8 Visible Emissions Notations

(a) Daily visible emission notations of the Emission Units #1 and #2 stack exhausts shall be performed during normal daylight operations when burning distillate oil #2 or Animal Fat/Greases and exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Preventive Maintenance Plan for these units shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.2.9 Monitoring

(a) The Permittee shall daily monitor the air and water temperatures, pressure drop, discharge/bleed-off water flow rates, and scrubber solution pH levels in the Venturi Scrubber VCS-008 and the Packed Bed Tower Scrubber PCT-008 (Emission Unit #3 emissions control) to maintain levels specified by the manufacturer, Preventive Maintenance Plan and Nuisance Odor Control Compliance Plan:

(1) discharge air temperature - less than 120^0 F;

(2) discharge water temperature - less than 120^0 F;

(3) pressure drop across both the Venturi and Packed Bed Tower scrubbers - from 2 to 10 inches of water;

(4) water discharge flow rates - from 5 to 10 gallons per minute from the Venturi scrubber, from 1 to 2 gallons per minute from the Packed Bed Tower Scrubber;

(5) PH of scrubber solution - from 3.0 to 5.0 pH.

(b) The Permittee shall daily monitor the air and water temperatures, pressure drop and discharge water flow rates, and scrubber solution pH levels in the plant air Packed Bed Tower scrubber PASN-75 Emission Unit #8 for fugitive odor control to maintain levels specified by the manufacturer and Preventive Maintenance Plan:

(1) discharge air temperature - less than 100^0 F;

(2) Scrubber bleed-off water temperature - less than 100^0 F;

(3) pressure drop - from 3 to 10 inches of water;

(4) bleed-off water flow rate - more than 2 gallons per minute;

(5) solution recirculation volume - more than 700 gallons per minute;

(6) pH of scrubber solution - from 3.0 to 6.0 pH.

(c) The Preventive Maintenance Plan for the Venturi Scrubber and the Packed Bed Tower Scrubbers shall contain troubleshooting contingencies and corrective actions for when the pressure drop and/or water flow falls below the allowed minimum.

(d) Additional inspections and preventive measures shall be performed as prescribed in the Preventative Maintenance Plan.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.2.10 Meat meal production

That the Permittee shall submit the quarterly reports of the meat meal production monthly throughput utilizing the reporting forms found in Attachment A of this Permit. The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years from the date of measurement or report. The records shall contain a minimum of the following:

(a) Calendar dates covered in the compliance determination period and

(b) Actual meat meal throughput since last compliance determination period and value calculated per limitation.

(c) The operation parameters of the Venturi Scrubber and the Packed Bed Tower Scrubbers, will be monitored and recorded daily in the Daily Monitoring Log Sheet as described in Condition D.2.9.

Send Original to :
City of Indianapolis
ERMD
Air Quality Management Section
Air Quality Compliance Data Group
2700 S. Belmont Ave.
Indianapolis, Indiana 46221-2091
Phone 317/ 327-2234 Fax: 317/ 327- 2274

Send copy to :
Indiana Dept. Of Environmental Management
Office of Air Quality
Compliance Data Section
100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015

FESOP Quarterly Report (Boilers)

Source Name: National By-Products
Source Address: 700 West Southern Ave., Indianapolis, IN 46225
FESOP No: F097-5579-00243 Facility: **Boilers (Emission Units #1 and #2)**

Parameters: Sulfur Content (%), Fuel Oil Usage per month Limit: 0.5 lbs SO_2/MMBtu; 0.5 % Sulfur; 2,716 kgal /12 months total distillate oil No. 2 usage; 3,563 kgal/12 month Animal Fat/Greases usage.

Quarter: _____ Year: _____

Month	Sulfur Content (%)	
	Oil #2	Animal Fat

SO_2 Emission Factors (EF):
Natural Gas: EF=**0.6** lb/MMCF; Distillate Oil #2: EF=**142xS** lb/kgal (S - weight % Sulfur; at S=0.5% Emission Factor: **71** lb/kgal); Animal Fat: EF=**78.5xS** lb/kgal (S - weight % Sulfur; at S=0.5% Emission Factor: **39.25** lb/kgal).

NOx Emission Factors (EF):
Natural Gas: EF=**140** lb/MMCF; Distillate Oil #2: EF=**20** lb/kgal;
Animal Fat: EF=**55** lb/kgal.

Month	Fuel Usage			NOx Emissions, ton			SO_2 Emissions, ton		
	MMCF (Natural Gas)	kgal (oil #2)	kgal (Animal Fat)	This month	Previous 11 months	12 month rolling	This month	Previous 11 months	12 month rolling

* Add additional rows if more than one fuel was burned in any current month.

Equivalency factors:
For SO_2 emissions: 1 MMCF of Natural Gas = 8.45 gal of Oil #2; 1 gal of Animal Fat/Grease = 0.553 gal of Oil $2.
For NOx emissions: 1 MMCF of Natural Gas = 2,545 gal of Animal Fat/Grease; 1 gal of Oil #2 = 0.364 kgal of Animal Fat/Grease.

9 No deviation occurred in this month
9 Deviation/s occurred in this month.
9 Attached are supporting spreadsheets.
9 Deviation/s has been reported on:_____

The filing of such information is mandated by Federal, State, and Local Air Pollution Legislation. Violation of this mandate through omission or false information may be subject to penalty.

I hereby certify that the information contained in this notification is complete and accurate to the best of my knowledge.

Submitted by:_____ Title/Position:_____
(Print/ Type)
Signature:_____ Date:_____

Send Original to :
City of Indianapolis
ERMD
Air Quality Management Section
Air Quality Compliance Data Group
2700 S. Belmont Ave.
Indianapolis, Indiana 46221-2091
Phone 317/ 327-2234 Fax: 317/ 327- 2274

Send copy to :
Indiana Dept. Of Environmental Management
Office of Air Quality
Compliance Data Section
100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015

FESOP Quarterly Report (Rendering System)

Source Name: National By-Products
Source Address: 700 West Southern Ave., Indianapolis, IN 46225
FESOP No: F097-5579-00243

Facility: Animal By-Products Rendering System, Emission Unit #3

Parameter: VOC

Limit: less than 25 tons/12 month period total;
3000 tons per months meat meal production (emission factor: 0.4 lb VOC / ton of meat meal production)

Quarter: _____ Year: _____

Month	Meal production throughput tons/month	VOC Emissions (tons/month)

9 No deviation occurred in this month
9 Deviation/s occurred in this month.
9 Attached are supporting spreadsheets.
9 Deviation has been reported on:_____

The filing of such information is mandated by Federal, State, and Local Air Pollution Legislation. Violation of this mandate through omission or false information may be subject to penalty.

I hereby certify that the information contained in this notification is complete and accurate to the best of my knowledge.

Submitted by:_____Title/Position:_____
(Print/ Type)

Signature:_____Date:_____

Indiana Department of Environmental Management
Office of Air Management

Addendum to the
Technical Support Document for FESOP Significant Permit Revision

Source Name:	**National By-Products, Inc.**
Source Location:	**700 West Southern Avenue, Indianapolis, Indiana 46225**
County:	**Marion**
SIC Code:	**2077, 2047, 2048**
Permit Revision No.:	**097-11785-00243**
FESOP No.:	**F097-5579-00243**
Permit Reviewer:	**Boris Gorlin**

On March 2, 2001, the Indianapolis Environmental Resources Management Division (ERMD) had a notice published in the Indianapolis Star, stating that **National By-Products, Inc.** had applied for a Significant FESOP Permit Revision relating to the operation of boilers and an animal by-products rendering system.

The notice also stated that ERMD proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On March 22, 2001, the National By-Products, Inc. submitted the following comment on the proposed Significant Permit Revision.

Comment 1:

> It would be convenient for our plant personnel who complete Quarterly Reports if the appropriate emission factors were printed on these reports. For example, on the meat meal thruput report, can the VOC emission factor of 0.400 lb/ton be listed? On the Boilers report can emission factors for natural gas, fuel oil, and animal fat be listed?

Response to Comment 1:

> Emission factors and equivalency factors (Animal Fat/Greases to Oil #2 consumption) were added on the Quarterly Reports forms.

FESOP Quarterly Report (Boilers)

Source Name: National By-Products
Source Address: 700 West Southern Ave., Indianapolis, IN 46225
FESOP No: F097-5579-00243 Facility: **Boilers (Emission Units #1 and #2)**

Parameters: Sulfur Content (%) in #2 Distillate Oil and Animal Fat/Grease (limit - 0.5 % Sulfur); #2 Distillate Usage Limit: 2,716 kgal/12 month total. ; Animal Fat/Greases Usage Limit: 3,563 kgal/12 month

Quarter:_____ Year:

SO_2 Emission Factors (EF):
Natural Gas: EF=0.6 lb/MMCF; Distillate Oil #2: EF=142xS lb/kgal (S - weight % Sulfur; at S=0.5% Emission Factor: 71 lb/kgal); Animal Fat: EF=78.5xS lb/kgal (S - weight % Sulfur; at S=0.5% Emission Factor: 39.25 lb/kgal).

NOx Emission Factors (EF):
Natural Gas: EF=140 lb/MMCF; Distillate Oil #2: 20 lb/kgal;
Animal Fat: EF=55 lb/kgal.

Month	Sulfur Content (%)	
	Oil #2	Animal Fat

Month	Fuel Usage			NOx Emissions, ton			SO_2 Emissions, ton		
	MMCF (Natural Gas)	kgal (oil #2)	kgal (Animal Fat)	This month	Previous 11 months	12 month rolling	This month	Previous 11 months	12 month rolling

* Add additional rows if more than one fuel was burned in any current month.

Equivalency factors:
~~For SO_2 emissions: 1 kgal of Oil #2 = 118.3 MMCF of Natural Gas; 1 kgal of Animal Fat = 65.4 MMCF of Natural Gas.~~
~~For NOx emissions: 1 kgal of Oil #2 = 0.143 MMCF of Natural Gas; 1 kgal of Animal Fat = 0.393 MMCF of Natural Gas.~~

For SO_2 emissions: 1 MMCF of Natural Gas = 8.45 gal of Oil #2; 1 gal of Animal Fat/Grease = 0.553 gal of Oil $2.
For NOx emissions: 1 MMCF of Natural Gas = 2,545 gal of Animal Fat/Grease; 1 gal of Oil #2 = 0.364 kgal of Animal Fat/Grease.

9 No deviation occurred in this month
9 Deviation/s occurred in this month.
9 Attached are supporting spreadsheets.
9 Deviation/s has been reported on:_____

The filing of such information is mandated by Federal, State, and Local Air Pollution Legislation. Violation of this mandate through omission or false information may be subject to penalty.

I hereby certify that the information contained in this notification is complete and accurate to the best of my knowledge.

Submitted by:_____Title/Position:_____
(Print/ Type)

Signature:_____Date:_____

Send Original to :

Send copy to :

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FESOP Quarterly Report (Rendering System)

Source Name: National By-Products
Source Address: 700 West Southern Ave., Indianapolis, IN 46225
FESOP No: F097-5579-00243

Facility: Animal By-Products Rendering System, Emission Unit #3

Parameter: VOC

Limit: less than 25 tons/12 month period total;
3000 tons per months meat meal production **(emission factor: 0.4 lb VOC / ton of meat meal production)**

Quarter: _____

YEAR: _____

Month	Meat Meal Production, ton		
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

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On April 20 and April 26, 2001 the IDEM OAQ submitted the following comments on the proposed Significant Permit Revision.

Comment 2:

(a) Condition D.1.2 (Sulfur Dioxide) includes NOx limits.

(b) For D.1.2 (c), for the equivalence, if the limit is in terms of gallons of fuel oil #2 (b), then the equivalence would make sense to be in terms of #2 oil gallons, not cubic feet of natural gas. The same concern with D.1.3 (b).

Response to Comment 2:

Condition D.1.2 was revised to include only the Sulfur Dioxide limitations. NOx limit was moved to new Condition D.1.3. Old Conditions D.1.3 and D.1.4 were renumbered to D.1.4 and D.1.5. Equivalency factors in Conditions D.1.2 (c) and D.1.3 (b) were revised.

Also, Condition D.1.5 (b) was added to require Animal Fat/Greases fuel analysis; results to be reported on the Quarterly Report (Boilers) form.

D.1.2 Sulfur Dioxide

(a) That pursuant to 326 IAC 7-1.1-2 (Sulfur Dioxide Limitations) and **326 IAC 2-8 (FESOP Program)**, sulfur dioxide emissions from the combustion of distillate oil (fuel Oil #2) or Animal Fat/Greases **(equivalent of Oil #6) each** shall be limited to 0.5 pounds per million BTU heat input (the equivalent of 0.5% by weight sulfur content at a higher heating value of 0.14 MMBtu per gallon for Oil #2 and 0.15 MMBtu per gallon for Animal Fat/Greases).

(b) The Permittee is limited to burning no more than 226,333 gallons of fuel oil #2 per month, so that the sourcewide sulfur dioxide (SO_2) emissions shall not exceed 8.33 tons per month, and 326 IAC 2-7 (Part 70 Permit Program) shall not apply.

~~(c) For the purposes of determining compliance with SO_2 limit, every 1000 gallons of No. 2 oil burned is equivalent to 118.3 million cubic feet of natural gas; every 1000 gallons of Animal Fat/Greases burned is equivalent to 65.4 million cubic feet of natural gas.~~

(c) For the purposes of determining compliance with SO_2 limit, every million cubic feet of natural gas burned is equivalent to 8.45 gallons of Oil No. 2; every gallon of Animal Fat/Greases burned is equivalent to 0.553 gallons of Oil #2.

D.1.3 Nitrogen Oxides

~~(d)~~ **(a)** The Permittee is limited to burning no more than 296,917 gallons of Animal Fat/Grease per month, so that the sourcewide Nitrogen Oxides (NOx) emissions shall not exceed 8.33 tons per month, and 326 IAC 2-7 (Part 70 Permit Program) shall not apply.

~~(e)~~ (b) ~~For the purposes of determining compliance with NOx limit, every 1000 gallons of No. 2 oil burned is equivalent to 0.143 million cubic feet of natural gas; every 1000 gallons of Animal Fat/Greases burned is equivalent to 0.393 million cubic feet of natural gas.~~

~~(e)~~ **(b) For the purposes of determining compliance with NOx limit, every million cubic feet of natural gas burned is equivalent to 2,545 gallons of Animal Fat/Grease, every gallon of No. 2 oil burned is equivalent to 0.364 gallons of Animal Fat/Grease.**

Compliance Monitoring Requirements [326 IAC 2-8-5(a)(1)]

D.1.~~3~~ **4** Visible Emissions Notations

(a) Daily visible emission notations of the Emission Units #1 and #2 stack exhausts shall be performed during normal daylight operations when exhausting to the atmosphere and when burning distillate oil #2 or animal fat/greases. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Preventive Maintenance Plan for these units shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.1.~~4~~ **5**. Sulfur Dioxide Emissions

The Permittee shall:

(a) Obtain a shipping receipt from the distillate oil No. 2 supplier for each shipment of distillate oil delivered certifying that the shipment complies with ASTM specifications (fuel sulfur content is 0.5% or less) for distillate oil No. 2 combusted in Emission Units #1 and #2.

(b) Perform a fuel analysis of Animal Fat/Greases each month when it is burned in the boilers Emission Units #1 and #2 to demonstrate compliance with Condition D.1.2 (a).

Indiana Department of Environmental Management
Office of Air Quality
and
Indianapolis Environmental Resources Management Division

Technical Support Document for a Significant Permit Revision to a Federally Enforceable State Operating Permit (FESOP)

Source Background and Description

Source Name:	**National By-Products, Inc.**
Source Location:	**700 West Southern Avenue, Indianapolis, Indiana 46225**
County:	**Marion**
SIC Code:	**2077, 2047, 2048**
Permit Revision No.:	**097-11785-00243**
Permit Reviewer:	**Boris Gorlin**

The Indianapolis Environmental Resources Management Division (ERMD) has reviewed a Significant Permit Revision application from National By-Products, Inc. relating to the operation of an animal by-products rendering system.

History

This permit (FESOP) was issued on December 13, 1996.

In 1997, in accordance with the Permit condition B.22 (Operational Flexibility [326 IAC 2-8-15]), the source replaced existing steam tube dryer - the Dupps model 1800 Equacookor, Emission Unit #3, by the same capacity Dupps model 320U Supercookor; the forced draft vapor condenser - the Air Conditioning Corp. model ACC 300 - was replaced by a Dupps Co. model 2P28. Also, the Millpoint Packed Bed Tower Scrubber was added to the existing Venturi Scrubber as the emission control devices for the rendering process.

On December 2, 1997, the required Stack Test was performed. The test results produced emission factor for by-products rendering system, Emission Unit #3, 0.143 lb/ton production, after control, lower than the one used for calculations of the source's potential emissions in the original FESOP (source specific emission factor 0.835 lb/ton production, after control, obtained during a stack test at a similar company plant at De Moines, Iowa).

On January 11, 2000, National By-Products, Inc. requested a permit revision as listed below.

- FESOP conditions be revised to accommodate the equipment replacements and results of the Stack Test conducted on December 2, 1997. The meal production throughput limit for the rendering system (Emission Unit #3) to be increased from **1,437** ton/month (**17, 245** ton/yr) to **2,500** tons/per month.

- Change of name of the responsible official.

On August 25, 2000, National By-Products, Inc., supplied the Nuisance Odor Control Compliance Plan requested by ERMD utilizing the additional plant air bed tower scrubber for odor control.

On October 25, 2000, National By-Products, Inc. requested an approval of burning animal fat/greases in the permitted Natural Gas and Fuel Oil #2 packaged steam boilers (Nebraska and Cleaver Brooks), 39.5 million BTU per hour heat input capacity each, identified as emission units #1 and #2.

On February 13, 2001, National By-Products, Inc. requested meat meal production limit to be increased to **3,000** ton/month (**36,000** ton/yr).

Enforcement Issues

There are no enforcement actions pending.

Emission Calculations

In the original FESOP the by-products rendering system (Emission Unit #3) production throughput was limited to **1,437 tons per month,** such that the limited potential VOC emissions from Emission Unit #3 are less than 24 tons per year and 326 IAC 8-1-6 (General Reduction Requirements) shall not apply. This limit was calculated using the source specific emission factor of **0.835** lb/ton production.

The VOC emission factor determined during the December 2, 1997 stack test was **0.143** lb/ton production.

The source requested a new increased limit of **3,000 tons per month** (**36,000** tons per year) production throughput, which is a fairly conservative estimate , and a new VOC emission limit of no more than **0.400 lb/ton** meat meal production, which is equivalent to VOC emission of:

0.400 lb/ton x 3,000 ton/month x 12 months / 2000 lb/ton = 7.2 ton/yr;

therefore, the limited VOC PTE from Emission Unit #3 (by-products rendering system) will be less than 25 ton/yr.

See detailed Appendix A (2 pages) for detailed PTE calculations.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

Potential to emit before Permit Revision:

Pollutant	PTE (tons/year)
PM	20.75
PM10	64.66
SO_2	**99.2**
NOx	46.2
VOC	24.46
CO	11.53
HAP	0

Unlimited Potential to emit after Permit Revision (addition of Animal Fat/Greases as a fuel burned in

boilers Emission Units #1 and #2):

Pollutant	PTE (tons/year)
PM	80.03
PM10	33.58
SO_2	99.2
NOx	**127.91**
VOC	26.95
CO	12.02
HAP	0

Potential emissions (as defined in the Indiana Rule) of NOx as a result of this modification are greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7-1.

The source has accepted a federally enforceable NOx limit of less than 100 tons per year.

Potential to Emit of Modification

The table below summarizes the potential to emit, reflecting all limits, of this modification. The control equipment is considered federally enforceable only after issuance of this Part 70 permit modification.

	Limited Potential to Emit (ton/year)						
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	HAPs
Rendering System, EU #3	14.3	14.3	2.8	<25.0	0.5	1.0	0
Two (2) Boilers 39.5MBtu each, EU #1 &#2	13.97	12.01	96.2	2.28	11.53	98.0	0
Hammer Mill, EU #4	12.05	1.095	0	0	0	0	0
Truck Unload Pit, EU #5	13.69	1.095	0	0	0	0	0
Link-Belt, EU #6	10.95	0.767	0	0	0	0	0
Link-Belt, EU #7	10.95	0.767	0	0	0	0	0
Total Emissions	75.91	30.4	99.01	<27.28	9.4	99.02	0
Limited PTE increase after Modification (burning only animal fat/greases)	**11.25**	**9.86**	**-26.49**	**-0.67**	**-2.63**	**49.54**	**0**

This modification to an existing minor stationary source is not major because the emission increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 1998 ERMD/OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM	0.964
PM-10	0.693
SO_2	0.0312
VOC	1.044
CO	4.368
NO_x	5.2
HAP (specify)	0

County Attainment Status

The source is located in Marion County.

Pollutant	Status
PM-10	Attainment
SO_2	Maintenance
NO_2	Attainment
Ozone	Maintenance
CO	Attainment
Lead	Attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC and NO_X emissions are considered when evaluating the rule applicability relating to the ozone standards. Marion County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Marion County has been classified as attainment or unclassifiable for all the criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Federal Rule Applicability

This modification is subject to New Source Performance Standard 40 CFR Part 60, Subpart Dc, (326 IAC 12) because boilers EU #1 and #2 have heat input capacity of 39.5 MMBtu/hr (more than 10 MMBtu/hr) each, it will commence after June 9, 1999, and it increases PM emission to which this standard applies (§60.14(c) and §60.40c(a)).

Pursuant to NSPS 40 CFR Part 60, §60.14(c), this modification is not subject to SO_2 requirements of this NSPS because it will not result in SO_2 emission increase.

Pursuant to NSPS 40 CFR Part 60, §60.43(c), the owner or operator of this source shall not cause to discharge into the atmosphere from the boilers EU #1 and #2 gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.

State Rule Applicability

326 IAC 6-1-2 (Nonattainment Area Particulate Limitations: specified)

This source is not subject to this rule because potential emissions of PM are less than 100 tons per year and actual emissions are less than 10 tons per year.

All the other State Rules applicable to this source will be applicable after this modification. No other

rules apply.

Recommendation

The staff recommends to the Administrator that the First Significant Permit Revision be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete Significant Permit Revision application for the purposes of this review was received on January 18, 2000, with additional information received on August 25, 2000, October 25, 2000 and February 13, 2001.

Proposed Changes

The following changes were made in the FESOP F097-5579-00243.

Section A

Condition A.1 General Information (Page 4 of 28) - the Responsible Official name was changed to Mr. Mark Myers.

A.1 General Information [326 IAC 2-8-3(c)]
The Permittee owns and operates an animal by-products rendering plant.

Responsible Official:	Mr.~~Paul M. Bohlig~~ **Mark Myers**
Source Address:	700 West Southern Street, Indianapolis, Indiana 46225
Mailing Address:	P.O.B. 33639, Indianapolis, IN 46203
SIC Code:	2077, 2047, 2048
County Location:	Marion
County Status:	~~Nonattainment~~ **Attainment** for all criteria pollutants ~~Particulate Matter and Sulfur Dioxide~~
Source Status:	Synthetic Minor Source, FESOP Program

Condition A.2. Emission Unit and Pollution Control Summary (page 4 of 28) - the description of the emissions units and control equipment was changed to read as follows:

A.2 Emission Units and Pollution Control Summary [326 IAC 2-8-3(c)]
The stationary source consists of the following emission units and pollution control devices:

(a) Two (2) Natural Gas and fuel oil #2 boilers (Nebraska and Cleaver Brooks), 39.5 million BTU per hour heat input capacity each, identified as emission units #1 and #2.

(b) Animal by-products rendering system, consisting of one (1) cooker (Dupps Co.~~Continuous Equacooker~~ **model 320U Supercookor**), 39,000 pounds per hour of raw material input and 9,750 pounds per hour discharge capacity (dry meat meal production - 25% of input) and ACC forced draft **(Dupps Co. model 2P28)** air condenser, identified as emission unit #3. Emissions are controlled by the Venturi Scrubber **model VCS-008** and **Millpoint** Packed Bed Tower Scrubber**, model PCT-008**.

(c) One (1) Millpoint PASN-75 packed bed tower scrubber for fugitive raw material odors control, identified as emission unit #8.

~~(c)~~**(d)** One (1) truck meat meal unload pit 12.5 tons per hour feed meal input capacity, identified as emission unit #4.

~~(d)~~**(e)** One (1) hammermill 5 tons per hour feed meal input capacity, identified as emission unit #5.

~~(e)~~**(f)** Two (2) link-belt conveyors 25 tons per hour feed meal input capacity, identified as emission unit #6 and emission unit #7.

Section C

Conditions C.1 and C.2 were changed to reflect new emission limits and current permit language:

~~C.1 Overall Source Limit (326 IAC 2-8)~~
~~Pursuant to 326 IAC 2-8, emissions of any regulated pollutant from the entire source shall not exceed 99 tons per 365 day period. Emissions shall include those from all emission points at the source including those that are insignificant as defined in 326 IAC 2-7-1 (20). The source shall be allowed to add insignificant activities not already listed in this permit, as long as the total emissions from the source do not exceed the above specified limits. In the event that any condition or combination of conditions in Section D of this permit differs from the above, the most restrictive limit will prevail.~~

C.1 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8, the potential to emit any regulated pollutant from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period.

(b) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided the source's potential to emit does not exceed the above specified limits.

(c) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.2 SO_2 **and NOx** Emissions

(a) Sourcewide SO_2 emissions shall **be less than 100** ~~not exceed 99~~ tons per year, such that 326 IAC 2-7 shall not apply.

(b) Sourcewide NOx emissions shall be less than 100 tons per year, such that 326 IAC 2-7 shall not apply.

Condition C.3 was changed to reflect the updated rule 326 IAC 5-1 (Opacity Limitations) language:

~~C.3 Opacity~~
~~Pursuant to 326 IAC 5-1-2 (Visible Emission Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), visible emissions shall meet the following:~~

~~(a) Visible emissions shall not exceed an average of 30% opacity in 24 consecutive readings.~~

~~(b) Visible emissions shall not exceed 60% opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period.~~

C.3 Opacity Limitations

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of thirty percent (30%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

Section D.1

Section D.1 was changed to reflect addition of Animal Fat/Greases combustion in boilers Emission Units #1 and #2 and new emission limits:

Two (2) natural gas and fuel oil #2 fired boilers (Nebraska and Cleaver Brooks) 39.5 million BTU per hour heat input capacity each, identified as emission unit #1 and emission unit #2**, burning Natural Gas, Distillate Oil #2, and Animal Fat/Greases**.

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 Particulate Matter

(a) That pursuant to 326-IAC 6-1-2 (Nonattainment Area Particulate Limitations) PM emissions from emission units #1 and #2 shall not exceed 0.15 pound per million Btu when firing distillate oil (fuel oil #2) **or Animal Fat/Greases** and 0.01 grains per dry standard cubic foot when firing natural gas.

(b) That pursuant to NSPS 40 CFR Part 60, §60.43(c), the owner or operator of this source shall not cause to discharge into the atmosphere from the boilers EU #1 and #2 gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of no more than 27 percent opacity.

D.1.2 Sulfur Dioxide

(a) That pursuant to 326 IAC 7-1.1-2 (Sulfur Dioxide Limitations), sulfur dioxide emissions from the combustion of distillate oil (fuel oil #2) **and Animal Fat/Greases** shall be limited to 0.5 pounds per million BTU heat input (the equivalent of 0.5% by weight sulfur content at a higher heating value of 0.14 MMBtu per gallon).

(b) The Permittee is limited to burning no more than 226,333 gallons of fuel oil #2 per month, so that the sourcewide sulfur dioxide **(SO_2)** emissions shall not exceed ~~8.25~~ **8.33** tons per month, and 326 IAC 2-7 (Part 70 Permit Program) shall not apply.

(a) The Permittee is limited to burning no more than 296,917 gallons of Animal Fat/Greases per month, so that the sourcewide Nitrogen Oxides (NOx) emissions shall not exceed 8.33 tons per month, and 326 IAC 2-7 (Part 70 Permit Program) shall not apply.

(b) For the purposes of determining compliance with SO_2 limit, every 1000 gallons of No.

2 oil burned is equivalent to 118.3 million cubic feet of natural gas; every 1000 gallons of Animal Fat/Greases burned is equivalent to 65.4 million cubic feet of natural gas.

(c) For the purposes of determining compliance with NOx limit, every 1000 gallons of No. 2 oil burned is equivalent to 0.143 million cubic feet of natural gas; every 1000 gallons of Animal Fat/Greases burned is equivalent to 0.393 million cubic feet of natural gas.

The Condition D.1.3. was changed to reflect the updated FESOP model language:

Compliance Monitoring Requirements [326 IAC 2-8-5(a)(1)]

~~D.1.3 Daily Visible Emissions Notations~~
~~Daily visible emissions notations shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, 80% of the time the process is in operation, not counting start up or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.~~

D.1.3 Visible Emissions Notations

(a) Daily visible emission notations of the Emission Units #1 and #2 stack exhausts shall be performed during normal daylight operations when exhausting to the atmosphere and when burning distillate oil #2 or Animal Fat/Greases. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Preventive Maintenance Plan for these units shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

Section D.2

The following changes were made:

(a) Section D.2 was revised to reflect the animal by-products rendering system, Emission Unit #3, equipment changes;

(b) nonapplicability of the rule 326 IAC 6-1-2 (based on less then 100 ton/yr potential and less than 10 ton/yr actual PM emission);

(c) updated Condition D.2.7 (Visible Emissions Notations) language;

(d) production throughput (tons per month) and VOC emission limit change; pounds per ton limit was added to reflect change in the source specific emission factor (determined during the initial stack test).

(e) Compliance Assurance Monitoring and Recordkeeping conditions for the Venturi Scrubber and Packed Bed Tower Scrubber were added; also, odor control compliance requirements were added .

(f) Meat production limit was changed on the Quarterly Report.

The Condition D.1.4. was changed to reflect addition of the Animal Fat/Greases as boilers fuel:

D.1.3. Sulfur Dioxide Emissions
The Permittee shall:

(a) obtain a shipping receipt from the **distillate oil No. 2** ~~fuel~~ supplier for each shipment of distillate oil delivered certifying that the shipment complies with ASTM specifications (fuel sulfur content is 0.5% or less) for distillate oil combusted in Emission Units #1 and #2;

(2) perform fuel analysis of the Animal Fat/Greases once a month when Animal Fat/Greases are combusted in boilers Emission Units #1 and #2, certifying that the fuel complies with ASTM specifications (fuel sulfur content is 0.5% or less).

Section D.2 (Pages 22 and 23 of 28) **FACILITY OPERATION CONDITIONS**

(a) Animal by-products rendering system, consisting of one (1) cooker (Dupps Co. ~~Continuous Equacookor)~~ **model 320U Supercookor)**, 39,000 pounds per hour of raw material input and 9,750 pounds per hour discharge capacity (dry meat meal production - 25% of input) and ACC forced draft **(Dupps Co. model 2P28)** air condenser, identified as emission unit #3.

(b) Emission unit #3 emissions are controlled by the Millpoint Venturi Scrubber model VCS-008 and Millpoint Packed Bed Tower Scrubber, model PCT-008.

(c) One (1) Millpoint PASN-75 packed bed tower scrubber for fugitive raw material odors control, identified as emission unit #8.

Limitations and Standards [326 IAC 2-8-4(1)]
D.2.1 Particulate Matter

(a) That pursuant to 326 IAC 6-3-2 (Process Operations: Particulate Emission Limitations) the particulate matter emissions from Emission Unit # 3 shall not exceed 11.85 pounds per hour.

~~(b) That pursuant to 326 IAC 6-1-2 (Nonattainment Area Particulate Limitations: Specified) the particulate matter emissions from Emission Unit #3 shall not exceed 0.03 grains per dry standard cubic foot.~~

(a) The Venturi Scrubber and the Packed Bed Tower Scrubber PCT-008 shall be in operation at all times when the Animal by-products rendering system Emission Unit #3 is in operation, in order to comply with this limit.

D.2.2 Volatile Organic Compounds (VOC)

~~(a) The meal production throughput for the Emission Unit #3 is limited to 1,437 tons per month such that the potential VOC emissions are less than 24 tons per year and 326 IAC 8-1-6 (General VOC Reduction Requirements) shall not apply.~~

(a) **The VOC emission from Emission Unit #3 shall be limited to less than 0.400 pounds per ton of meat meal production.**

(b) Meat meal production throughput shall be limited to 3,000 tons per month, such that the potential VOC emissions are less than 25 tons per year and 326 IAC 8-1-6 (General VOC Reduction Requirements) shall not apply.

D.2.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]
A Preventive Maintenance Plan, in accordance with Condition B.13 of this permit, is required for this facility.

D.2.4. Fugitive odor control
Plant air scrubber emission unit #8 will be in operation at all times when trailers containing odorous materials will be parked inside the building, when odorous raw materials are being dumped, handled, stored or ground, and when hot meal is being handled, stored or ground in the mill building.

Testing Requirements [326 IAC 2-8-5]

D.~~2.4~~**2.5** Particulate Matter
That during the period between 180 days and 360 days after issuance of this permit, the permittee shall perform PM and PM10 testing utilizing methods per 40 CFR Part 60 Appendix A, Method 5, 17, 40 CFR Part 51 Appendix M, Method 201, 201a, 202, as approved by the Administrator. This test shall be repeated at least once every five years from the date of this valid compliance demonstration. PM10 includes filterable and condensible PM10.

D.~~2.5~~ **2.6** Volatile Organic Compounds (VOC)
That during the period between 180 days and 360 days after issuance of this permit, the permittee shall perform VOC testing utilizing a method acceptable to ERMD and approved by the Administrator. This test shall be repeated at least once every five years from the date of this valid compliance demonstration.

Compliance Assurance Monitoring Requirements [326 IAC 2-8-5(a)(1)]

D.~~2.6~~ **2.7** Volatile Organic Compounds (VOC)
That pursuant to 326 IAC 2-8-5 (FESOP: Compliance Requirements) the Permittee shall: daily monitor and record meat meal production (tons) which shall not exceed ~~1,437~~ **3,000** tons per month, such that VOC emissions shall ~~not exceed 24~~ **be less than 25** tons per year.

~~D.2.7 Daily Visible Emissions Notations~~
~~Daily visible emissions notations shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, 80% of the time the process is in operation, not counting start-up or shut-down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.~~

D.2.8 Visible Emissions Notations

(a) Daily visible emission notations of the Emission Units #1 and #2 stack exhausts shall be performed during normal daylight operations when burning distillate oil #2 or Animal Fat/Greases and exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Preventive Maintenance Plan for these units shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.2.9 Monitoring

(a) The Permittee shall daily monitor the air and water temperatures, pressure drop, discharge/bleed-off water flow rates, and scrubber solution pH levels in the Venturi Scrubber VCS-008 and the Packed Bed Tower Scrubber PCT-008 (Emission Unit #3 emissions control) to maintain levels specified by the manufacturer, Preventive Maintenance Plan and Nuisance Odor Control Compliance Plan:

(1) discharge air temperature - less than 120^0 F;

(2) discharge water temperature - less than 120^0 F;

(3) pressure drop across both the Venturi and Packed Bed Tower scrubbers - from 2 to 10 inches of water;

(4) water discharge flow rates - from 5 to 10 gallons per minute from the Venturi scrubber, from 1 to 2 gallons per minute from the Packed Bed Tower Scrubber;

(5) PH of scrubber solution - from 3.0 to 5.0 pH.

(c) The Permittee shall daily monitor the air and water temperatures, pressure drop and discharge water flow rates, and scrubber solution pH levels in the plant air Packed Bed Tower scrubber PASN-75 Emission Unit #8 for fugitive odor control to maintain levels specified by the manufacturer and Preventive Maintenance Plan:

(1) discharge air temperature - less than 100^0 F;

(2) Scrubber bleed-off water temperature - less than 100^0 F;

(3) pressure drop - from 3 to 10 inches of water;

(4) bleed-off water flow rate - more than 2 gallons per minute;

(5) solution recirculation volume - more than 700 gallons per minute;

(6) pH of scrubber solution - from 3.0 to 6.0 pH.

(c) The Preventive Maintenance Plan for the Venturi Scrubber and the Packed Bed Tower Scrubbers shall contain troubleshooting contingencies and corrective actions for when the pressure drop and/or water flow falls below the allowed minimum.

(d) Additional inspections and preventive measures shall be performed as prescribed in the Preventative Maintenance Plan.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.~~2.8~~ **2.10** Meat meal production

That the Permittee shall submit the quarterly reports of the meat meal production monthly throughput utilizing the reporting forms found in Attachment A of this Permit. The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years from the date of measurement or report. The records shall contain a minimum of the following:

(a) Calendar dates covered in the compliance determination period and

(b) Actual meat meal throughput since last compliance determination period and value calculated per limitation.

(d) The operation parameters of the Venturi Scrubber and the Packed Bed Tower Scrubbers, will be monitored and recorded daily in the Daily Monitoring Log Sheet as described in Condition D.2.9.

FESOP Quarterly Report (Boilers) (Page 27 of 28)

Animal Fat/Greases was added as an additional fuel burned; Animal Fat/Greases usage limit of 3,563 kgal/yr was added; NOx emissions column was added.

FESOP Quarterly Report (Page 28 of 28)

The meat production limit was changed to reflect the changes made to Permit Condition D.2:

Limit: **less than 25** ~~24~~ tons/12 month period total; **3000** ~~1,437~~ tons per month meat meal production.

Send Original to :

City of Indianapolis
ERMD
Air Quality Management Section
Air Quality Compliance Data Group
2700 S. Belmont Ave.
Indianapolis, Indiana 46221-2091
Phone 317/ 327-2234 Fax: 317/ 327- 2274

Send copy to :

Indiana Dept. Of Environmental Management
Office of Air Quality
Compliance Data Section
100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015

FESOP Quarterly Report (Boilers)

Source Name: National By-Products
Source Address: 700 West Southern Ave., Indianapolis, IN 46225
FESOP No: F097-5579-00243 Facility: **Boilers (Emission Units #1 and #2)**

Parameters: Sulfur Content (%), Fuel Oil Usage per month Limit: 0.5 lbs SO_2/MMBtu; 0.5 % Sulfur; 2.716 kgal /12 months total distillate oil No. 2 usage; **3,563 kgal/12 month Animal Fat/Greases usage**

Quarter: _____ Year: _____

Month *	Sulfur Content (%)	Heat Content MMBtu	Fuel Usage (kgal/month)	SO_2 Emissions		NOx Emissions, ton
				ton		

Add additional rows if more than one fuel was burned in any current month

9 No deviation occurred in this month
9 Deviation/s occurred in this month.
9 Attached are supporting spreadsheets.
9 Deviation/s has been reported on:_____

The filing of such information is mandated by Federal, State, and Local Air Pollution Legislation. Violation of this mandate through omission or false information may be subject to penalty.

I hereby certify that the information contained in this notification is complete and accurate to the best of my knowledge.

Submitted by:_____Title/Position:_____
(Print/ Type)

Signature:_____Date:_____

Send Original to :

Send copy to :

Send Original to :

City of Indianapolis
ERMD
Air Quality Management Section
Air Quality Compliance Data Group
2700 S. Belmont Ave.
Indianapolis, Indiana 46221-2091
Phone 317/ 327-2234 Fax: 317/ 327- 2274

Send copy to :

Indiana Dept. Of Environmental Management
Office of Air Quality
Compliance Data Section
100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015

FESOP Quarterly Report (Rendering System)

Source Name: National By-Products
Source Address: 700 West Southern Ave., Indianapolis, IN 46225
FESOP No: F097-5579-00243

Facility: Animal By-Products Rendering System, Emission Unit #3

Parameter: VOC

Limit: **less than 25** ~~24~~ tons/12 month period total;
3000 ~~1,437~~ tons per months meat meal production

Quarter: _____ Year: _____

Month	Meal production throughput tons/month	VOC Emissions (tons/month)

9 No deviation occurred in this month
9 Deviation/s occurred in this month.
9 Attached are supporting spreadsheets.
9 Deviation has been reported on:_____

The filing of such information is mandated by Federal, State, and Local Air Pollution Legislation. Violation of this mandate through omission or false information may be subject to penalty.

I hereby certify that the information contained in this notification is complete and accurate to the best of my knowledge.

Submitted by:_____Title/Position:_____
(Print/ Type)

Signature:_____Date:_____

Appendix A: Emission Calculations

Company Name: **National By-Products**
Address, City, IN Zip: **700 West Southern Avenue, Indianapolis, IN 46225**
FESOP No. **F097-5579-00243**
Reviewer: **Boris Gorlin**

Unlimited Potential to Emit from Combustion

Source	Fuel Source	Consumption Units	mmbtu/hr Rating	Annual Hrs Operation	Annual Fuel Consumption	PM10 (Ton/Yr)	PM (Ton/Yr)	SO2 (Ton/Yr)	NOX (Ton/Yr)	VOC (Ton/Yr)	CO (Ton/Yr)
Boilers EU #1 & #2 39.5 MMBtu/hr each	Nat gas	MMCF	**79.0**	8760.0	692	**2.15**	**2.15**	**0.21**	**48.44**	**0.97**	**12.11**
	No. 2 oil	1,000 gal	**79.0**	8760.0	4,943	**2.47**	**4.94**	**175.48**	**49.43**	**0.62**	**12.36**
	Animal Fat/Grease	1,000 gal	**79.0**	8760.0	4,614	**15.55**	**18.08**	**90.54**	**126.87**	**2.95**	**11.53**

Limited Potential to Emit from Combustion

Source	Fuel Source	Consumption Units	mmbtu/hr Rating	Annual Hrs Operation	Annual Fuel Consumption	PM10 (Ton/Yr)	PM (Ton/Yr)	SO2 (Ton/Yr)	NOX (Ton/Yr)	VOC (Ton/Yr)	CO (Ton/Yr)
Boilers EU #1 & #2 39.5 MMBtu/hr each	Nat gas	MMCF	**79.0**	8,760	692.0	**2.15**	**2.15**	**0.21**	**48.44**	**0.97**	**12.11**
	No. 2 oil	1,000 gal	**79.0**	8,760	**2,716**	**1.36**	**2.72**	**96.42**	**27.16**	**0.34**	**6.79**
	Animal Fat/Grease	1,000 gal	**79.0**	8,760	**3,563**	**12.01**	**13.97**	**69.92**	**97.98**	**2.28**	**8.91**

NOTE: Assume that the heating value of natural gas is 1,000 Btu/Cubic Foot, distillate oil - 140 MMBtu/kgal, Animal Fat/Grease -150 MMBtu/kgal. Animal Fat/Grease is assumed equivalent to Fuel Oil #6.

	Fuel Oil Emission Factors Lb/1,000 Gallons	
	No. 2	No. 6
PM	2	7.84
PM-10	1	6.74
SO2	142	78.5
NOx	20	55
VOC	0.252	1.28
CO	5	5
	AP-42, 1.3	
	Wt. % Ash =	1
	Wt%Sulfur=	**0.5**

	Natural Gas Emission Factors Rated Capacity 10-100 MMBtu/hr		
	< 10 *	10-100	> 100
	Lb/ MMCF		
PM	12	6.2	3
PM-10	12	6.2	3
SO2	0.6	0.6	0.6
NOx	100	140	550
VOC	5.3	2.8	1.4
CO	21	35	40
	AP-42, 1.3		

Montly Fuel Consumption Limits	
No. 2 Oil	**226,333** gal
Animal Fat/Grease	**296,917** gal

SAMPLE CALCULATION: $\frac{\text{MMCF}}{\text{YR}} \times \frac{\text{LB}}{\text{MMCF}} / \frac{\text{2000 LB}}{\text{TON}} = \frac{\text{TONS}}{\text{YR}}$

Note: Potential to Emit SO2 is greater than 25 tpy or 10 lb/hr. Therefore, facility is limited to 0.5 lb SO2 / MMBtu for distillate oil (No. 2 oil) and/or Animal Fat/Grease combustion.

Equivalency of Fuel Oils and Natural Gas consumption (multiplication factors)

SO_2	Oil #2, kgal
Natural Gas,**1 MMCF**	**0.00845**
Animal Fat, **1 kgal**	**0.553**

NOx	Animal Fat, kgal
Natural Gas,**1 MMCF**	**2.545**
Oil #2, **1 kgal**	**0.364**

Appendix A: Emission Calculations

Company Name: **National By-Products**
Address, City, IN Zip: **700 West Southern Avenue, Indianapolis, IN 46225**
FESOP No. **F097-5579-00243**
Significant FESOP Revision No. **097-11785-00243**
Reviewer: **Boris Gorlin**

Emission Unit #3 (320U Supercookor) Limits

	Meat Meal Production Limit	VOC Emission Limit (Emission Factor)	
	tpy	lb/ton	tpy
Old Limits	17,245	0.835	24
New Limits	**36,000**	**0.400**	**<25**

PTE after limiting Unit #3 (Cooker) meal production to 3,000 ton/month (36,000 tpy) and Fuel Oil consumption limits

Emission Unit #	S/V #	Description	PM10	PM	SOx	NOx	VOC	CO
3	S3	Cooker	14.3	14.3	2.8	1.0	**24.0**	0.5
1,2	S1, S2	Boilers, 39.5 MMBTU/hr **(Fuel Oil #2 only)**	1.358	2.716	**96.42**	27.160	0.342	6.790
1,2	S1, S2	Boilers, 39.5 MMBTU/hr **(Natural Gas only)**	2.145	2.145	0.208	48.443	0.969	12.111
1,2	S1, S2	Boilers, 39.5 MMBTU/hr **Animal Fat/Grease only)**	12.007	13.966	69.924	**97.98**	2.280	8.908
4	V1	Hammer Mill	1.095	12.05	-	-	-	-
5	V2	Truck Unload Pit	1.095	13.69	-	-	-	-
6	V3	Link-Belt	0.767	10.95	-	-	-	-
7	V4	Link-Belt	0.767	10.95	-	-	-	-
Total PTE, TPY (Nat.Gas only):			**20.18**	**64.09**	**3.01**	**49.48**	**24.97**	**12.60**
Total PTE, TPY (#2 Fuel Oil only):			**19.39**	**64.66**	**99.22**	**28.19**	**24.34**	**7.28**
Total PTE, TPY (Animal Fat/Grease only)			**30.04**	**75.91**	**72.73**	**99.02**	**26.28**	**9.40**
PTE increase from Modification, TPY			**10.65**	**11.82**	**0**	**49.54**	**1.31**	**0**